

CLAIMS

1. Elevator group control method for allocating landing calls and car calls to elevators so that the objectives set are met, **characterized** in that a car-specific energy consumption file is generated to describe the energy consumption occurring during each trip of the elevator from each floor to each one of the other floors with different loads, and the calls active in different situations of control are so allocated that the minimization of the energy consumption resulting from serving all the active calls is included as one of the set objectives.
2. Method as defined in claim 1, **characterized** in that a maximum waiting time is defined and the calls are allocated within that time, minimizing energy consumption.
3. Method as defined in claim 1, **characterized** in that minimization of energy consumption is used as a main criterion of allocation during light traffic hours.
4. Method as defined in claim 1, **characterized** in that the energy consumption files for identical elevators comprised in the same elevator group are combined.
5. Method as defined in claim 1, **characterized** in that the energy consumption file is produced from mathematical models.
6. Method as defined in claim 1, **characterized** in that the energy consumption file is generated via approximate calculations.
7. Method as defined in claim 1, **characterized** in that the energy consumption file is generated by measuring

the actual realized energy consumption for trips from one floor to another with different loads.

8. Method as defined in claim 7, **characterized** in that
5 before the measurements an initial file is composed from approximate empirical data.

9. Method as defined in claim 7, **characterized** in that
10 the energy consumption file is updated with measured, realized consumption data.

10. Method as defined in claim 9, **characterized** in that, in the updating process, the data in the energy consumption file is changed in accordance with a pre-
15 scribed rule towards the measured data.

11. Method as defined in claim 9, **characterized** in that, in the updating process, the data in the energy consumption file is replaced with measured data.
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12. Method as defined in claim 1, **characterized** in that the car load is divided into categories e.g. with 10-% intervals from an empty car to a fully loaded car in the energy consumption file.
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13. Method as defined in claim 12, **characterized** in that the number of categories equals the possible numbers persons served by the car from zero load to full load and at least one category for eventual excesss
30 loads.

14. Method as defined in claim 12, **characterized** in that, in the case of multi-car elevators, the load to be divided into categories consists of the common to-
35 tal load of the cars coupled together.

15. Method as defined in claim 1, **characterized** in that the energy consumption file is implemented as a three-dimensional database, where the energy consumption data is a function of three variables, viz.
- 5 starting floor, arrival floor and car load.